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Navy Malaria Researchers Acclaimed for Medical
Breakthrough

By Jan Davis, Bureau of Medicine and Surgery

SILVER SPRING, Md. - Navy Medicine is playing a breakthrough role in opening the door to uncovering the mysteries of one of the deadliest illnesses in the world - one that kills more than a million people each year.

Navy Medicine researchers were key in decoding the malaria-causing *Plasmodium falciparum* parasite genome, a formidable task that took more than six years' combined effort by military and academic scientists in the U.S. and Europe. Mapping the malaria genome will be an important step to the development of malaria vaccines and drugs.

P. falciparum, the most deadly of the malaria parasites, has more than 5,000 genes in 14 chromosomes. Mapping the parasite's genes is a major step toward understanding how to develop effective malaria vaccines and drugs. No licensed vaccine currently exists, and preventive drugs are becoming less effective due to the development of drug resistant malaria strains.

Four research articles that Navy Medicine researchers were instrumental in developing will be published in a special section of the Oct. 3 issue of the prestigious *Nature* magazine. The Navy's research will also get special recognition by the magazine's editors.

Members of the Navy research team published in *Nature* are: Capt. Daniel Carucci, Medical Corps, who is the director of the malaria program at the Naval Medical Research Center; Martha Sedegah, Ph.D.; Robert M. Anthony; Army Col. J. David Haynes, Medical Corps; Kathleen Moch; John B. Sacchi, Ph.D.; Adam A. Witney;

James Pedersen; and retired Capt. Stephen L. Hoffman, Medical Corps. Hoffman was also director of the Navy's malaria program from 1987 to 2001.

Navy Medicine's interest in developing effective interventions to malaria is rooted in the impact the disease has on troops deployed where the disease is rampant. The vanguard of malaria research for the Navy is located at the Naval Medical Research Center in Silver Spring, Md.

"In this century, in every conflict where malaria was endemic, there were more man-days lost to malaria than to bullets," said Carucci. "We became involved (in *P. falciparum* gene mapping) from the first because we felt that knowing the sequence of the genome would provide insights toward developing strategies for vaccine and drug development."

Developing a vaccine against a complex organism such as malaria is much more daunting than developing one against simple viruses. *P. falciparum* has a complex life cycle, involving different stages of development, two hosts (the *Anopheles* mosquito and humans), two different target cells in the human host (liver and red blood cells), and a mystifying way of evading the immune response, including the ability to constantly alter the protein coat exposed to the immune system.

Navy Medicine is already working on malaria vaccines, using the information garnered from the *P. falciparum* genome project. Carucci and his research team are taking a novel approach to developing a vaccine using DNA-based strategies. Navy researchers have been using this approach to develop malaria and other vaccines, including dengue and anthrax, since the mid-1990s. DNA vaccines are made up of tiny amounts of genetic material that are used by the human cells to generate immunity against the pathogen.

Carucci and his team have successfully tested DNA malaria vaccines in the lab and in humans, proving their safety and ability to generate immune responses. The Navy team is combining information from the Malaria Genome Project with novel vaccine delivery methods that may be the best "shot" yet in the fight against malaria.

According to the World Health Organization, as many as a half a billion people may contract malaria each year. Worldwide, more than a million people die from the disease annually, mostly children in Africa.

Press conferences were held in both London and Washington, DC to announce the breakthrough research.

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Martin is Navy's New Deputy Surgeon General

By Brian Badura, Bureau of Medicine and Surgery

WASHINGTON, DC - Rear Adm. Kathleen L. Martin, Nurse Corps, is the Navy's new Deputy Surgeon General, the first Nurse Corps officer to be assigned to the position.

She will also serve as the Vice Chief of the Bureau of Medicine and Surgery.

"These are changing times, and I'm looking forward to the future opportunities and challenges that come as part of being the Deputy Surgeon General," said Martin during the change of office a ceremony held today.

Martin previously was Commander of National Naval Medical Center Bethesda, Md, where she was also the first Nurse Corps officer to have command of the military treatment facility.

Vice Adm. Michael L. Cowan, Medical Corps, the Navy's Surgeon General, said Martin's past accomplishments have prepared her for her position.

"She's exhibited a tremendous amount of leadership, grit and determination," he said. "She's helped us (in Navy Medicine) move to become a better, family-centered organization."

Martin, who entered naval service in 1973, acknowledged that the practice of medicine today is much different than when she first began her career as a Navy nurse.

"Our responsibility is no longer just taking care of sick patients," she said. "Today, we must work hard by being proactive if we are to address all of the healthcare needs of our people and their families."

She relieves Rear Adm. Donald Arthur, Medical Corps, who will assume command at NNMCMC Bethesda on Oct. 4.

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NMC San Diego's Women's Health Clinic Promises Care Continuity

By Journalist Second Class Terrina Weatherspoon, Naval Medical Center San Diego

SAN DIEGO - Naval Medical Center San Diego has opened a new satellite obstetrical and gynecological clinic with care that rivals that available in any civilian community.

More than 300 babies are delivered at Naval Medical Center San Diego every month, and because of physicians' busy schedules and military responsibilities, it's not always possible for patients to see the same doctor for every appointment. One way San Diego and its branch clinics are solving this problem is to establish a "group practice" women's health clinic.

The clinic, located at Point Loma on the grounds of the old Naval Training Center, is based on the model common in civilian practices. Patients will usually see the same provider for each visit, but when they can't, another doctor within the group will see them.

"This is particularly important for our OB patients," said Lt. Denise Gechas, Nurse Corps, manager at the NTC Women's Health Clinic. "In most cases, patients have either met the other provider or heard about him or her from their regular provider."

The small clinic has six providers who offer personalized and flexible healthcare. On-premises services include mammography, ultrasound, laboratory, and pharmacy. Additionally, a registered nurse provides individual and

group education on women's health topics.

The response to the clinic has been exceptional.

"We did an independent survey and found that only two percent of women who utilize the OB services at the NTC Women's Health Clinic would rather deliver in a civilian facility than a military facility," Gechas said.

One-on-one care and multiple services at the clinic may soon help shrink that number even more.

"We are also able to take walk-in appointments and very possibly get them in to see their regular doctor," Gechas said. "Our goal is to continue to provide OB care to most, if not all, of our active duty family members despite their impending choice to deliver at one of the local community hospitals."

The NTC Women's Health Clinic may be the first, but plans are underway to expand the small women's clinic concept.

"Instead of one big Ob Gyn clinic, the current plan is to have three small clinics at the (San Diego) Medical Center and two at NTC," Gechas said. "We want each and every woman to feel comfortable, secure and welcome."

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Fleet Hospital Jax "Gets Ready" with Field Training
By Lt. Cmdr. Jerry Rostad, Fleet Hospital Minneapolis

CAMP PENDLETON, Calif. - The specter of war with Iraq made the eight days of field training at the Fleet Hospital Operations and Training Command (FHOTC) in Camp Pendleton take on a new meaning for the nearly 250 members of Fleet Hospital Jacksonville.

Dubbed "Fawt-SEE" for short, FHOTC prepares Navy Fleet Hospitals for deployment. The exercise Fleet Hospital Jacksonville participated in was the first of a three-phase training cycle that concludes with an Operational Readiness Exercise (ORE) in 2003.

For many unit members, this was the first experience in a field environment. In addition to learning how to live in the desert, the training included erecting and packing up a tent-based hospital, learning patient flow in an operational setting and dealing with the potential threats of chemical, biological, and radiological weapons.

Hospital Corpsman Third Class Eureka Colzie, participating in her first field exercise, felt the training was a valuable experience.

"It's preparing me a great deal. Practicing and knowing what will happen releases that anxiety of the unknown," she said. The FHOTC training curriculum focused an entire day on dealing with the threat of chemical, biological, and radiological weapons. The day culminated with every sailor donning a gas mask and going through a gas chamber.

Hospital Corpsman Second Class Durrell Williams said the FHOTC gas chamber was an important training experience.

"You learn to do it right. The way you train is the way you'll perform during the real thing," he said.

Mess Specialist Second Class Mark Lash said the adjustment from cooking in a brick and mortar building to

compartmentalized containers was significant. He also realized the importance of a hot meal for the unit.

"The first couple of days we were all eating (cold packaged) MREs," Lash said. "But the night we had the first hot meal - wow! I was amazed at how everybody's morale shot up."

The FHOTC training concluded with a mass casualty exercise that focused on establishing lines of communication and coordination among the various units of the hospital and support elements.

"The goal here wasn't so much on patient care. Rather, we needed to get a good feel for how all of the pieces of a fleet hospital need to communicate and coordinate," said Lt. Cmdr. Christine Mankowski, Medical Service Corps, Fleet Hospital Jacksonville's director for administration.

In addition to medical personnel, Fleet Hospital Jacksonville comes complete with all the elements necessary to support a 500 bed hospital, including food service, security, communication, supply, and structure.

Capt. J.T. Coyne, Medical Service Corps, FHOTC commanding officer, said this first phase of field deployment is a major evolution, considering more than 90 percent of Fleet Hospital Jacksonville have never participated in the training.

"There are all new relationships and all new jobs. It's tough and things can go wrong," he said. "It's a test of the command."

But Coyne did not hesitate to grade Fleet Hospital Jacksonville. "They're squared away, tightly organization with good senior enlisted leadership," he said.

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San Diego Sponsors Critical Care Skills-A-Thon
By Journalist Second Class Terrina Weatherspoon, Naval
Medical Center San Diego

SAN DIEGO - Naval Medical Center San Diego's critical care unit conducted its third semi-annual skills-a-thon designed to certify and re-certify healthcare providers on the newest drugs and specialty equipment used in critical care nursing.

"There are 22 booths set up for five days, eight hours a day," said Lt. Cmdr. Daren Purnell, Nurse Corps. "Each person must visit each of the booths and get their competency card signed off. What it will result in is an experienced and trained Nurse Corp."

The booths focus on everything from point of care testing to airway management. Hospital Corpsman Third Class Jessica Stopler, leading petty officer in the critical care unit, was one of the booth instructors.

"I'm here to talk to people about the use of chest tubes - what they do, how to calculate the drainage and what to do in case of air leaks," she said. "We deal with a lot of heart and lung patients and chest tube surgeries, so we have to be on the same page so that our patients get the benefit of a confident staff."

The skills-a-thon ensures the continuous and best-trained doctors, nurses and corpsmen, according to Cmdr. J. Scott

Parish, Medical Corps, the CCU's department head. "We want to make sure that the treatment and training is standardized throughout the Navy. When you are all working together from a set standard, it is less likely that you will run into error," he said.

In the past, training was held at different times and with different departments throughout the year. It was difficult for people to get certified and re-certified because they couldn't attend some of the training and, as a result, readiness suffered. Now it is offered in one place twice a year.

"Education is the key," said Stopler. "You can never teach or learn too much."

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DoD and OPM Announce End of FEHBP Demonstration
From DoD Public Affairs

The Department of Defense (DoD) Federal Employees Health Benefits Program (FEHBP) Demonstration Project will end Dec. 31, 2002. Beginning Jan. 1, 2003, demonstration project beneficiaries will resume health care coverage with TRICARE.

The project was mandated by Congress for three years and was jointly sponsored by DoD and the Office of Personnel Management. It was among several DoD demonstration projects targeted to improving health care options for Medicare-eligible beneficiaries. The FEHBP Demonstration Project was available at 10 sites within the United States and Puerto Rico.

TRICARE options for beneficiaries enrolled in the FEHBP demonstration project will vary according to their beneficiary category. FEHBP Demonstration Project beneficiaries who are age 65 and over, Medicare eligible and enrolled in Medicare Part B may begin to use TRICARE For Life, DoD's wraparound Medicare coverage, immediately when the demonstration ends.

Beneficiaries who are age 65 and over and Medicare eligible but who are not enrolled in Medicare Part B may purchase Medicare Part B during a special enrollment period that will be announced at a later date. This special enrollment period will allow these beneficiaries to become eligible for TRICARE For Life benefits on Jan. 1, 2003. A premium surcharge may be imposed on beneficiaries who declined enrollment in Medicare Part B when they first became Medicare eligible.

Health care options for beneficiaries who are not Medicare eligible may include TRICARE Prime, TRICARE Extra and TRICARE Standard. Beneficiaries who are under age 65 and are Medicare eligible due to a disability or end-stage renal disease must be enrolled in Medicare Part B in order to be eligible for TRICARE Prime, TRICARE Extra or TRICARE Standard, and they will receive DoD's wraparound Medicare coverage, TRICARE For Life.

TRICARE pharmacy benefits also are available. Beneficiaries may have prescriptions filled at MTF pharmacies free of charge, or for a nominal fee, prescriptions may be filled through the National Mail Order Pharmacy (NMOP) or at civilian network and non-network pharmacies.

Beneficiaries are eligible for comprehensive dental

benefits under the TRICARE Retiree Dental Program (TRDP). The TRDP offers diagnostic, preventive, basic and major restorative services, endodontic and periodontic services, prosthodontic services, orthodontics, oral surgery, anesthesia, drugs and post-surgical services, and emergency services. All premiums are paid by the beneficiary and vary depending on the beneficiary's place of residence.

The TRICARE Management Activity will mail information about the demonstration project end date and future health care options to beneficiaries of the FEHBP Demonstration Project. Beneficiaries also may contact the FEHBP Demonstration Project Customer Care Center from 9:00 a.m. to 7:30 p.m. EDT at 1-877-363-3342 (English) or at 1-866-363-3342 (Spanish) or visit the TRICARE Web site at www.tricare.osd.mil/fehbp/ for more information.

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Healthwatch: October is Breast Cancer Awareness Month
By Aveline V. Allen, Bureau of Medicine and Surgery

According to the National Cancer Institute (NCI), breast cancer is one of the most common type of cancer among women in the United States, second only to skin cancer. NCI estimate more than 180,000 women are diagnosed with breast cancer each year.

Early detection is paramount for the quickest and most complete recovery.

"Women should be reminded that the best breast cancer detection is a yearly mammography and a clinical exam, along with monthly self breast exams," said Capt. Anne V. Forsha, Nurse Corps, a nurse educator at the National Capital Area Breast Care Center located at National Naval Medical Center, Bethesda, Md.

Medical research shows that certain conditions may increase a woman's risk of getting breast cancer, such as a personal history of breast cancer, family history, certain breast changes, genetic alterations, late childbearing, and taking hormone replacements.

"I think the biggest change this year has been the Women's Health Study at NIH that shows an increase of breast cancer for hormone replacement therapy users," said Forsha.

Medical experts do not know what causes this disease, but report that the risk increases as a woman gets older. It is uncommon for women under age 35 to get it, while it is not uncommon for women over age 50, and the highest risk occurs for women over age 60. It is also more common in white women than African American or Asian women.

It is important to beware of certain symptoms that may suggest the onset of breast cancer such as a lump or thickening in or near the breast or in the underarm area; a change in the size or shape of the breast; tenderness; or a change in the way the skin of the breast may look or feel. See your doctor if you notice

warm, swollen, red or scaly skin development.

What's your best defense against breast cancer? Make sure you perform monthly breast self-exams at home, see your family doctor for clinical breast exams and have regular screening mammograms. NCI reports that the screening mammogram is currently the best procedure for finding breast cancer before symptoms occur.

Research also indicates regular exercise and drinking milk of any type, three or more glasses a day, can also aid in reducing the chances of getting breast cancer.

Medical studies reveal that mammograms reduce the risk of dying from breast cancer. According to the NCI, most doctors recommend that women in their forties and older have mammograms every one to two years.

Breast cancer is not a disease that strictly afflicts women - more than a thousand men will be diagnosed with breast cancer this year, according to the NCI.

Additional information on breast cancer is available at www.cancer.gov/cancer_information.

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